

REMARKS

Support in the specification for the claim amendments and new claims is as follows: claims 1-2 — page 9, first full paragraph; claim 4 — page 10, lines 12-14; and claim 5 — page 10, lines 10-17.

The rejections under 35 U.S.C. 102(b) and 103(a) based on Baile et al are traversed for the following reasons.

Baile et al. discloses a solid lubricant including a synthetic hydrocarbon oil which has a viscosity of 33 mm²/s at 38° C or including a synthetic hydrocarbon oil having a viscosity in the range from about 15 to about 300 mm²/s at 38° C and also discloses that “conventional lubricating additives such as nylon or teflon powder and molybdenum disulfide may also be incorporated in the matrix in a known manner” (col, 8, line 37-40). However, the compositions of Baile et al. do not provide the advantages of the presently claimed solid lubricants, which include improved filling factor and reduction of the rotational torque of the bearing. Moreover, Baile et al. does not disclose or make obvious the presently claimed blending ratios of extreme pressure additive and/or anti-wear agent to the lubricating oil (claims 1-4 and 6) or that the extreme pressure additive and/or the anti-wear agent is 1.5 to 2.5% (claims 5 and 6) of phosphate or a carbamate in organometallic complexes in which the metal element is Zn or Mo (claims 4-6) or selection of a mineral oil within a very narrow range of kinematic viscosity and of

polyethylene resin within very narrow molecular weight and melting point ranges (claim 5).

Baile et al. does not disclose or make obvious the claimed solid polymeric lubricant compositions which exhibit, in a well-balanced manner, low torque, seizure prevention, and prevention of foreign materials from entering into the bearing (claims 1, 2, 4, 5, 6) or a rolling bearing provided with those polymeric lubricant compositions (claim 3). In order to obtain these properties, selection of the kinematic viscosity of the base oil within a narrow range is very important, and this is neither taught by nor obvious from Baile et al. More specifically, applicant has found that such selection of kinematic viscosity of the base oil prolongs the life of the bearing and prevents foreign materials from entering into the bearing because it improves the filling factor of the solid polymeric lubricant composition.

Applicant discovered that to achieve the aforementioned advantages the kinematic viscosity of the base oil should not exceed $160 \text{ mm}^2/\text{s}$ but not be lower than $100 \text{ mm}^2/\text{s}$. Moreover, applicant also discovered that because the conditions relating to load and velocity, as well as temperature of the environment, may be severe, to prevent seizure of the bearing, it is very important to add the claimed proportions of the claimed extreme pressure additive and/or anti-wear agent. Applicant discovered, as well, that when the proportion of these additives is

inadequate, the desired effects are not attained but when the proportion is too great, the additives have negative influence on the lubrication performance.

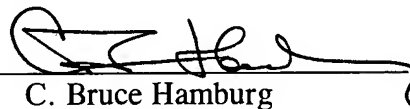
Thus, applicant invented the meticulous balancing of the parameters and selection of materials necessary to achieve simultaneously a multiplicity of advantageous effects. This was far beyond mere optimization obvious to one of ordinary skill in the art.

A three month extension of time is hereby requested for which please charge the government fee of \$930.00 to Deposit Account No. 10-1250. Please charge any fee deficiency or credit any overpayment to the same deposit account.

Respectfully submitted,

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